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ABSTRACT

This publication discusses and analyzes issues related to job training in the high school. Section 1 describes the nature of the job training problem by presenting views of constituencies affected by high school programs. The interests of these groups are examined: students, instructional staff members, school administrators, parents, employers, and elected officials. Section 2 provides information on forces affecting criteria for evaluating policy options. These forces are summarized as four views of job training: human capital, signaling, training opportunity, and core and periphery. Section 3 discusses these criteria for assessing policy options: action oriented, equity effect, and efficiency effect. Section 4 presents three policy options for reforming job training in the high school--eliminate job training from the high schools, reorganize high school job training to provide only general prerequisite skills to master any specific occupational area (diminish distinctions between academic and vocational curricula), and reorganize job training in the high school to enhance occupationally specific instruction (sharpen the distinctions between academic and vocational curricula). Discussion then focuses on student access reforms. Section 5 states recommendations intended to aid policymakers in their pursuit of effective and equitable job training programs. (YLB)

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# TOWARD EXCELLENCE IN SECONDARY VOCATIONAL EDUCATION: PROVIDING JOB TRAINING

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## FOREWORD

*Toward Excellence in Secondary Vocational Education: Providing Job Training* examines policy issues associated with the preparation of students for entry-level employment. The increased emphasis on academic excellence has called into question the role of vocational education in the secondary school. This paper offers compelling reasons for retaining job training in the high school and explores implications of its further development for youth and adults.

This paper is one of seven produced by the Information Systems Division of the National Center. This series of information analysis papers should be of interest to all vocational and adult educators, including Federal and State agency personnel, teacher educators, researchers, administrators, teachers, and support staff.

The profession is indebted to Dr. David W. Stevens, Professor of Economics at the University of Missouri, for this insightful review of these issues. Dr. Stevens recently served on the Vocational Education Advisory Committee of the Missouri State Board of Education. He is a noted economist who has written widely on the area of human resource development.

Dr. Harry M. Levin, Professor of Education and Economics and Director of the Institute for Research on Educational Finance and Governance at Stanford University; Dr. Anthony P. Carnevale, Consulting Economist, Washington, D.C.; Dr. Linda Lotto, Assistant Director and Dr. Suk Kang, Research Specialist of the National Center for Research in Vocational Education contributed to the development of the paper through their reviews of the manuscript. Staff on the project included Dr. William Hull, Senior Research Specialist; Dr. Oscar Potter, Graduate Research Associate; James Belcher, Program Associate; and John Tennant, Graduate Research Associate. Janet Ray served as word processor operator for this manuscript. Editorial assistance was provided by Janet Kiplinger and Judy Balogh of Editorial Services at the National Center.

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## EXECUTIVE SUMMARY

Job training in the high school is particularly vulnerable to unintended consequences resulting from the pursuit of academic excellence at the secondary school level because it has generally not been an explicit topic for debate in the excellence forums reported to date. (The National Commission on Secondary Vocational Education report, which was released November 29, 1984, is an obvious exception.)

This publication analyzes three policy options for reforming job training in the high school. They are as follows:

1. Eliminate job training from the high schools.

2. Reorganize high school job training to provide only general prerequisite skills to master any specific occupational area.

3. Reorganize job training in the high school to enhance occupationally specific instruction.

Action with respect to any one of these categories is shown to create forces that will affect the others. Also cutting across this classification of reforms are (1) consideration of high school job training settings (general, comprehensive, vocational, secondary area vocational center, secondary-postsecondary, and secondary-adult) and (2) complementary or substitute roles that are, or could be, served by postsecondary institutions, proprietary schools, and employers.

The purpose of this publication is to discuss and analyze issues related to job training in the high school. These issues are examined for unintended consequences of reform measures.

Costs associated with job training in the high school are real and outcomes for student populations vary with the specific proposed policy option. Anticipated outcomes of each option for students, instructional staff, school administrators, parents, employers, and elected officials are discussed.

Elected and appointed public officials—the primary audience for this publication—will find the recommendations for job training in the high school realistic and practical. Staff members in the executive and legislative branches of both Federal and State government, school administrators, and concerned citizens will find this analysis insightful and interesting.

Contrasting beliefs about the forces that affect students' subsequent employment opportunities are explored through the presentation of complementary theories about the role high school job training might play in promoting a student's subsequent competitive status in job candidacy.

Reform options are assessed on the basis of four criteria:

- Is the reform defined in a way that ensures action can be taken?

- Is the appropriate individual, group, or organization identified whose responsibility it should be to introduce the reform?

- Is it clear who benefits and who loses from reforms within the high school job training arena and elsewhere?

- In what way(s) will the proposed reform improve the competitiveness of individual students, high school job training curricula, and the Nation's economy; and in what way(s) would these entities be sheltered from competitive forces?

The analysis of reform options offers compelling reasons for retaining job training in the public high school. Having concluded that there should be job training, two approaches are explored: (1) diminish the distinctions between academic and vocational curricula in the high school or (2) sharpen these distinctions. The first of these approaches takes advantage of students' well-documented indecision about future educational and employment commitments. Distinctions are consciously blurred to give the students a subsequent opportunity to exercise a broader range of options than would be available otherwise. The second approach accepts the academic-vocational distinction and takes advantage of it to strengthen the immediate marketability of those who complete the job training curriculum.

In each instance, it is demonstrated that performance-based pressures are likely to favor exclusion of those who might otherwise require extra commitments of resources to achieve personal competitiveness. The physically and mentally challenged, minorities, and female students in some instances may be further hindered if discriminatory actions are anticipated upon graduation. Resource allocation criteria must be carefully scrutinized to minimize the possibility of such untoward consequences of reform actions.

Recommendations are offered that promote the replacement of process criteria (such as specified enrollment quotas) with effectiveness criteria that place a more stringent performance burden on the high schools. Innovative suggestions are offered that could produce substantial increases in funding for high school job training without increasing taxes.

# INTRODUCTION

## Purpose and Organization

Educational reform promises to remain high on the Nation's agenda during the last half of the 1980s. Both professional and lay publications offer cumulating evidence of the momentum that has been attained to date in this reform movement.

Given this momentum for reform, it is of the utmost importance to be vigilant regarding unintended effects of the changes that are being introduced into our educational systems. Job training in the high school is particularly vulnerable to unintended consequences resulting from the pursuit of academic excellence at the secondary school level because it has generally not been an explicit topic for debate in the "excellence" forums reported to date.

The purpose of this paper is to discuss and analyze issues related to job training in the high school. Preparation for work remains an important goal of vocational education in the secondary schools today. To what degree can high school job training fulfill the needs of employers in today's labor market? Can the current educational offerings be adapted to meet future labor needs or are new educational delivery systems needed? This section describes the nature of the job training problem by presenting views of constituencies affected by high school programs. The next section provides information on forces affecting criteria for evaluating policy options. These forces are summarized as four views of job training. Criteria for assessing policy options are discussed. Then, three policy options for reforming job training in the high school are presented. Following discussion of these three policy options, conclusions and recommendations are stated. These recommendations are intended to aid policymakers in their pursuit of effective and equitable job training programs. The recommendations are presented as *guidelines* for effective policy formulation, not as solutions for specific problem resolution. Each local, State, and Federal situation is too complex for prescriptive, simplistic solutions.

## Targeted Audiences

The policy options that are examined here offer opportunities for action at the National, State, and local levels. Elected and appointed public officials, staff members in the executive and legislative branches of both Federal and State Government, school administrators, and concerned citizens will find recommendations upon which they can act to reform job training in the high schools of our Nation.

## Approach

The identification of deficiency in the high school job training sphere differs depending upon who is asked to address the issue. The next section introduces the views of a student, an instructional staff member, a school administrator, a parent, an employer, and an elected official. This cataloging of concerns is followed by the introduction of four complementary ways of thinking about these weaknesses—perspectives that influence the practicality of, and enthusiasm expressed about, alternative reform suggestions.

Based upon the description of current deficiencies and the exposition of alternative

ways to assess their importance, criteria for judging policy options are introduced. These assessment criteria are then used to examine potential actions that might be taken in various quarters to reform job training in high schools. A concluding section offers recommended choices drawn from this list of possible reforms.

## Definitions

What do *job training* and *high school* mean here? *Job training* can be thought of as being synonymous with the term *vocational education*, as defined in the Carl D. Perkins Vocational Education Act (U.S. Congress 1984): "Organized educational programs which are directly related to the preparation of individuals [for] paid or unpaid employment . . . requiring other than a baccalaureate or advanced degree" (p. 55). The term *high school* includes general high schools, comprehensive high schools, vocational high schools, and secondary-level area vocational centers (see Bottoms and Copa 1983 and Nelson 1984 for elaboration on these classifications). The focus here is on job training, though much of what is said may have applications for public institutions and proprietary schools.

## Cautions

Any attempt to identify deficient features of job training in the high school requires generalization. This invites reader dissent when the allegation is inaccurate with respect to their personal sphere of interest. Such dissent is welcomed if it is really based on the absence of a deficiency, reform is not sought as an end unto itself. However, after absorbing the section that introduces the complementary perspectives about the nature of employment opportunity in the United States, some readers may want to rethink their conclusions about whether or not deficiencies exist.

## The Problem

It is not difficult to prepare a list of alleged weaknesses in high school job training. It is hard to create a useful classification of these features, one that can guide the search for desirable reforms.

The interests of the following groups are examined:

- Prospective and current students
- Instructional staff members
- School administrators
- Parents
- Employers
- Elected officials

These constituencies are not, in fact, mutually exclusive. Employers may be parents and taxpayers, as might teachers and school administrators. However, it is important to identify the paramount issues that arise from a given perspective. This is the only way that conflicting goals can be detected and differing priorities can be revealed. The political feasibility, and therefore practical relevance, of specific policy options should be considered in the context of these conflicts and contrasting priorities.

## Students

At the present time students have uneven access to job training at the secondary level. This unevenness can be characterized in geographic terms, by the diversity of curricula available, by the state-of-the-art nature of the instructional staff's competence and the facilities and equipment with which they have to work, by the counseling practices that influence their choice of curriculum, by the performance standards that are imposed

during enrollment, by the differential assistance that is given to those who require other than routine treatment to meet the established standards, and by the employing community's response to completion of job training activities in the high school.

Students also exhibit different maturation patterns that translate into differing behavioral priorities while they are in high school. Dropout prospects, regularity of attendance, conformity with disciplinary standards, peer relationships, and motivation to participate actively in learning opportunities have all been shown to be influenced by the high school's offerings.

**Instructional Staff Members**

The current and future relevance of teachers' own skills varies. Facilities and available equipment and materials differ in quality and appropriateness for the instructional process. Students exhibit differing abilities, motivation, and interpersonal skills. Faculty colleagues and administrators offer differing amounts of respect and support. Job opportunities outside the high school are of varied attractiveness, both as substitutes for teaching and as income supplements to teaching.

**School Administrators**

The availability of community, State, and Federal funds varies. Citizen support for, or opposition to, job training in the high school differs. Employer participation in curriculum design, inservice training for instructional staff, job opportunities offered to graduates, and citizen support are uneven across school districts. Teacher competencies, motivation, and institutional commitment differ, as do student attributes among districts.

**Parents**

Responsible adults want "the best" for their children. Often parents discourage their child's participation in a nontraditional curriculum. Different values are expressed with respect to what one's own children should do compared to what other peoples' children should do. The community is expected to respond differently to their children compared to other children.

**Employers**

Many opinion surveys have documented employers' emphasis on attitude, motivation, communication and reasoning skills, appearance, and interpersonal skills relative to specific job skills. However, technical job training in the high school also has been shown to complement subsequent on-the-job productivity enhancement.

**Elected Officials**

Myriad forces influence the attitudes of elected officials toward job training in the high school. School administrators seek funds and discretionary authority to spend these funds. Instructional staff members seek financial and job security for themselves and up-to-date facilities and equipment for their schools. The latter may conflict with the search for security.

Parents seek limited tax burdens and "the best" for their children. These may be conflicting objectives. Employers seek insulation from competitive forces, limited tax burdens, and relief from burdensome personnel costs.

In the face of these constituent pressures, elected officials seek definitive evidence that job training in the high schools is

satisfying important constituent objectives. Or, less charitably, given the limited interest that has been shown in evaluative evidence to date, they seek to ensure that evidence contrary to important constituent interests does not surface.

### A Synthesis of Views

The perspectives on job training in the high school may be summarized as follows:

- Students seek an interesting curriculum, and secondarily, one that will prepare them for a personally satisfying and rewarding employment opportunity upon graduation. These two objectives are not uniformly attainable in today's high schools.

- Instructional staff members seek assurances that their role in the educational process will remain secure and rewarding. They seek up-to-date, if not state-of-the-art, facilities and equipment which do not threaten their own incumbency. These standards are not uniformly met in today's high schools. High school administrators seek managerial discretion to design an educational experience that is consistent with multiple constituent interests. They encounter many barriers to acquiring the necessary discretionary authority to act in pursuit of this objective.

- Parents seek recognition of their child's individual potential. However the typical high school experience is often highly routinized and unresponsive to the uniqueness of each child. Parental presence and expression of interest in each of these emerging adults' well-being are frequently missing in today's society.

- Employers seek competent and dependable employees who are able and willing to assume both team and independent responsibilities. To the extent that they are not sheltered from competitive forces, employers want prospective new hires to assume routine production assignments quickly and at minimal cost to the employer. Many of today's high schools are unable to offer such reliable assurances.

- Elected officials seek supportive evidence of the role high school job training plays in meeting the above constituents' objectives, and they seek to avoid disclosures of contrary evidence. The record to date has offered evidence of both types. (There is one important caveat here. The function of executives is to execute, and the task of legislators is to legislate. Evidence of a deficiency in public high school job training is likely to be viewed negatively by elected officials only if they expect to be blamed for this eventuality; otherwise, the deficiency offers an opportunity for visible action. Depending upon the electorate's memory span, action per se might be a more important determinant of reelection prospects than the effects of that action.)

The inevitable conclusion that emerges from this enumeration is that those who are interested in the reform of job training in the high school can be expected to promote quite different reforms, depending upon the nature of their interest. It is apparent that the target of one group's displeasure may simultaneously serve as another group's sinecure. This ensures that adversaries will appear to oppose virtually any substantive reform. Indeed, the absence of opponents to reform proposals can be taken as a warning that the reform may make little difference.

Consider a high school job training curriculum that lacks stringency. Immediate student gratification may be high. Little effort will be expected of the instructional staff. Few demands will be made for improved

facilities and equipment. The program may be known as an available dumping ground by faculty colleagues in other curricula.

Who are the winners and losers here? The students are likely to be happy, for now. The instructional staff is comfortable. Other faculty colleagues are relieved to be rid of their problem cases. The institution's administrator is likely to be applauded by both groups of instructional staff members, both for enhancing the quality of their students and for not threatening their incumbency. Even the parents and school board may be pleased with the limited resource demands that are made.

So, who loses? The answer depends upon the importance that is placed on association with a high school job training program. We must acquire a working understanding of the concepts introduced in the next section before a response is attempted.

For some readers, however, the burning question is not, How can we *reform* job training in the high school? Instead, their question is, How can we *eliminate* job training from the high school? So, let's pause to consider their proposal. Who would be affected if secondary-level job training were abolished? Who would win and who would lose? At this point, only superficial answers can be offered. The incumbent instructors would lose. Their colleagues who were using these programs as a destination for unwanted students from their own programs would also lose. Students who sought immediate gratification through these programs, which is not available elsewhere, would lose, for now. High school administrators would lose in the short run. Community colleges and proprietary schools would be likely winners. The classification of parents and employers in this case is more difficult to predict. If the affected students successfully enroll in an equally or more stringent alternative curriculum, then both parents and employers might win. But, if the affected students withdraw from high school, both groups might lose. Again though, the reliability of prediction depends upon the importance given to job training in the high school as a ticket to subsequent self-realization.

Up to this point, the "problem" has been introduced as a series of complaints by different interested parties. These complaints have been characterized as frequently contradictory from a remediation standpoint. Reforms intended to achieve one purpose are likely to worsen another; the creature "looks different" to each observer.

# USEFUL CONCEPTS FOR THINKING ABOUT JOB TRAINING IN HIGH SCHOOLS

## Background

Informed citizens differ in their conclusions about what forces really matter in affecting an individual's life chances to participate in productive, challenging, and personally rewarding employment. Underlying individual beliefs about these forces are unconscious "theories." Here, four complementary views about these forces are introduced and contrasted. The differences among these approaches to thinking about job training in the high school form the foundation upon which the subsequent assessment of policy options is built.

It is important to consider the potential contribution each view might offer to a practical consideration of reforms. What is obvious to one might be entirely absurd to another, but the behavior of each is driven by what they believe. Recall Brown's (1984) admitted momentary apoplexy when his argument to a young prison inmate that he could not possibly win on the futile path he had chosen elicited this response: "I see where you comin' from Mr. Brown, but you got things kind of turned around the wrong way. You see, all the things that you say could happen to me is dead on the money, and that is why I can't lose" (p. 36ff).

## Four Views of Job Training

### A Human Capital View

This approach asserts that individual productivity differences can be reduced to a common denominator that permits us to array individuals along a continuum according to their embodiment of greater or lesser amounts of "human capital" (Carelli 1964). What is this common denominator? Roughly, it is cognitive ability or skill; the ability to do something with a greater or lesser degree of facility. It is assumed that this is what matters in the employer's decision whether to hire, how much to pay, whether and when to train on-the-job, and whether to retain or promote.

There is no known method for directly measuring the quantity of human productive potential. Even the strongest advocates of the usefulness of the human capital concept admit this. They recognize that time spent in school, for instance, is not synonymous with absorption of learning. They are also aware that individual abilities to *market* the skills they have acquired through learning differ. And, they know that an individual's productive contribution is frequently dependent, to varying degrees, upon the actions of others (i.e., teamwork). Nevertheless, the central belief of adherents to this human capital view is that productivity enhancement will be rewarded, on the average, by preferred employment opportunities.

Some adherents stress the *independence* and *uniqueness* of individual productive potential, playing down the importance of team productivity and multiple levels of potential productivity existing within each of us at any given time depending upon the opportunity provided to realize that potential.

Clearly, for those who believe in a reliable connection between skill acquisition and employment opportunity, job training in the high school ought to be judged on the basis of *its provision of marketable skills*.

### A Signaling View

Spence (1974) says that the cumulation of apparent anomalies to the anticipated reliable connection between skill acquisition and employment opportunity leads to the consideration of factors *in addition to* cognitive skills that might influence job prospects. Here, since employers are uncertain about individual productive potential, candidates are assigned a rating based on previous group experience or some proxy for such experience. If the employer has no basis for comparing an individual with previous experience, the uncertainty factor looms larger in the decision process. To the extent that an individual is viewed as deriving from a low-to-average productivity group, the candidate's likelihood of success is thereby diminished. (This is the well-known phenomenon called "statistical discrimination.")

This view is important for its message for those who demand, "Treat me as an individual, which is what I am." The message is, "Don't hold your breath!" We all "size up" individuals whom we encounter in our daily activities. Depending upon the importance and expected duration of the encounter, we invest differing amounts of energy in acquiring information about the person. Usually, prospective mates receive a greater expenditure of energy in this assessment than do grocery clerks, bank tellers, or students. The point is, *selected* signals are used in making decisions about people.

The potential role for high school job training in promoting individual life chances may be fundamentally different from that which is associated with the human capital view. Here, acquisition of a high school job training credential may enhance, or tarnish, an individual's ranking by an employer. The reasons for this treatment may have little to do with actual cognitive skill enhancement that occurred in the job training program. For example, a student's decision to *enter* a job training program might be interpreted by a prospective employer as a signal of commitment to a generic type of work. Enrollment in a prestigious program might be read as a signal that the student rates high on a combined ability-motivation scale, whether or not substantial skill enhancement has actually taken place there. On the negative side, participation in a job training curriculum might be viewed as a substitute for more highly valued core competencies that are required to ensure employee adaptability and growth potential on the job. The point is, many signals in addition to cognitive skill acquisition may be associated with the job training credential. In fact, the credential may be a poor measure of actual competency attainment and may weaken its value in the employer's weighing if prior skill achievements matter.

Those who endorse this signaling view of employer personnel practices stress the importance of determining which signals matter and then ensuring that high school job training opportunities pay attention to enhancing the positive ones and diminishing the negative ones. This is not to say that allegiance should be blindly pledged to immediate employer requirements, but rather that cognizance should be taken of these requirements. Of particular importance, with respect to assessment of educational reform proposals, is a recognition that signals sometimes substitute for one another, whereas in other settings, they may be independent or complementary. For example, historically competency attainment has not been enough to ensure physically and mentally challenged individuals a fair shake in the marketplace. Female and minority candidates have encountered similar obstacles. More recently, white male candidates have alleged that female or minority status has resulted in favored treatment. This debate cannot be resolved here, but an important point can be made: *more than cognitive skill acquisition matters.*

### A Training Opportunity View

If the human capital and signaling concepts are to be applied for the purpose of reforming job training in the high school, it is

important to focus on the relative importance of specific attributes as determinants of individual life chances. What matters? Thurow (1975) plays down the notion of labor markets as auctions in which employer demands for well-defined occupational skills contest with the compensation requirements of those who offer these skills. In the place of this competitive interaction of demand for and supply of skills—an interaction that establishes a market wage—employers are seen as offering different opportunity packages. Each of these bundles consists of an established compensation level that is not negotiable with individual candidates and a defined opportunity to learn on the job. In other words, individual job seekers encounter a "take it or leave it" opportunity; they are bidding for access to a chance to be trained on the job.

Here, specific skill acquisition prior to job entry is downplayed. It is acknowledged that in some cases particular skills can be learned in an institutional setting other than on the job and then transferred with little loss of applicability to a production setting. However, it is alleged that the preponderance of opportunities place little value on pre-job-entry skill acquisition. In fact, depending upon the uniqueness of the production setting, such skills might well have to be unlearned.

Since employers hold the keys to future training opportunities on the job, a crucial question is: What determines who is successful in gaining access to these opportunities? First, it is apparent that individual job opportunities can be arrayed along a continuum based on the amount of on-the-job training that is offered. Second, it is well known that entry-level opportunities bear different relationships to subsequent promotional possibilities. And third, the *number* of such opportunities depends upon the international competitiveness of the Nation's economy. Given these basic facts, employers are said to assess each candidate with respect to the following standard: How much will it cost me to bring this person to the point of independent competent performance?

This view is valuable in the pursuit of reform options for job training in the high school because it forces us to ask: What importance will be given to cognitive skill acquisition (human capital) and other signals associated with participation in a high school job training opportunity in arriving at such a cost estimate? Again, this should not be interpreted to mean that the single-minded reform goal should be to reduce this cost to prospective employers. The point is simply that the opportunity to learn on the job is a function, at least in part, of costs borne by the employer—that is, relative hiring and on-the-job training costs. Policy options for reform of job training in the high school must recognize this.

The three views introduced up to this point offer increasingly complex, but also increasingly useful, characterizations of the forces that influence high school students' life chances. The first view stresses independent cognitive achievement alone. The second view complements the probable relevance of cognitive achievement with unspecified "signals" that employers also use in assessing job candidates. And the third view clearly identifies a standard used by employers in conducting this assessment, which permits us to consider potential signals that are associated with job training in the high school against a specific target.

**Core and Periphery**

Edwards, Reich, and Gordon (1975) focus on the societal forces that mold the adoption of, and priorities accorded to, particular signals. They address the factors that determine how many and which candidates secure access to opportunities to realize their individual goals and potentials.

The essential concept that emerges from their view, which can contribute to our

assessment of reform options, is a distinction that is drawn between opportunities for continued productivity enhancement, on the one hand, and opportunities that offer no such potential, on the other hand. A network of interacting forces is identified that sorts groups and individuals into channels that largely predetermine which type of opportunity will be available. The importance of this view is that it encourages serious examination of the historical record. What patterns are revealed in enrollments by race, sex, physical and mental challenge, and demonstrated grade performance? What funds allocation patterns are revealed? Who participates in business-education partnerships? Adherents to this approach answer that race, sex, and physical or mental challenge are unevenly represented in high school job training programs in proportion to their representation in the high school student population. This is due to a host of social forces that have molded student, parent, counselor, and instructional staff decisions.

Is uneven representation prima facie evidence of a deficiency in high school job training? No simple answer can be given, but neither can the question be ignored. The answer depends upon which doors are opened and which are closed by participation in the job training. Enrollment per se is only an intermediate goal, although it has usually been treated as a terminal goal. Job training in the high school should be viewed as an enabling activity, and it should be evaluated accordingly.

**Summary**

Four increasingly complex views about the forces that promote employment opportunity have been introduced here. In their most simplistic form, these views offer the following advice:

- **The human capital view** says get a skill and get a job.
- **The signaling view** says forget being treated as an individual; become identified with high-productivity groups.
- **The training opportunity view** says convince employers that they need to expend little money to bring you to the point of independent competent performance.
- **The core and periphery view** says follow the signaling and training opportunity advocates' advice, but some can expect a much warmer reception than others. Access is partly up to the prospective employee, but it is also a social responsibility.

These contrasting views provide a basis for introducing criteria by which options for reforming high school job training can be judged. These criteria can then be applied to specific reforms to reveal their respective strengths and weaknesses.

## CRITERIA FOR ASSESSING POLICY OPTIONS TO REFORM JOB TRAINING IN THE HIGH SCHOOL

The policy options that follow are each intended to be action oriented in the sense that some identifiable individual or coalition of individuals could introduce the reform in question. This approach is consistent with what has recently been called a strategy of "small wins" (Weick 1984). A small win is a complete implemented outcome of moderate importance. The next available small win may not coincide with a third party's identification of the next "logical" action. Therefore, opportunism is a virtue.

The problem to be addressed by these reforms, again, is that there is unequal access to high school job training—training that may or may not matter later in life. This uneven access and the nature of the job training presently offered can be traced to origins in the attitudes and actions of school administrators and instructional staff members, school board members, State legislators and members of the Congress, parents, employers, and the students themselves (Benavot 1983; Everhart 1982; and Kanter and Tyack 1982).

Current high school job training opportunities are being transformed by the current push for excellence, but this transformation is largely a residual effect, rather than a planned design: "The national dialogue on excellence in education has paid little attention to the question of what it will take to guarantee that all students have a fair chance to meet the new and higher standards now being imposed on them" (Toch 1984). Given this situation, the following criteria are set forth:

- **Action oriented**—Is the reform defined in a way that action can be taken and is the appropriate group to introduce this reform also identified?
- **Equity effect**—Is it clear who will benefit and who will lose from reform within the high school job training sphere and elsewhere? How is self-realization potential affected?
- **Efficiency effect**—In what way(s) will the proposed reform improve the competitiveness of individual students, high school job training, and the Nation's economy; and in what way(s) would these entities be sheltered from competitive forces?

## REFORM OPTIONS: JOB TRAINING IN THE HIGH SCHOOL

### Background

The reform options introduced here fall into two broad categories. One set of reforms focuses on who is given an opportunity to participate in high school job training. A second set of reforms focuses on what those who choose to participate get. Obviously, these are interdependent reforms: the nature of the job training will determine, in part, who is attracted to this curriculum; and the attributes of the enrollees will determine, in part, the nature of the curriculum. The content reforms are introduced first.

### High School Job Training Reforms

The options that are examined here are as follows:

- Eliminate job training from the high schools.
- Reorganize high school job training to provide *only* general prerequisite skills to master any specific occupational area, generic skills useful in both labor market and everyday life settings, and a foundation for career decisions. (Bottoms and Copa 1983)
- Reorganize job training in the high school to enhance occupationally specific instruction.

Cutting across this three-way classification of high school job training reform options are two additional considerations:

- What type(s) of high school job training setting (general, comprehensive, vocational, secondary area vocational center, secondary-postsecondary, and secondary-adult) should be promoted?
- What complementary or substitute roles should be served by postsecondary education, proprietary institutions, and employers?

### Option: Eliminate Job Training from the High Schools

This action would be a local school board's decision; neither Federal nor State authorities could impose this requirement on a local district. However, uniform State requirements can certainly be a dominant force in a local board's decision: "Leaders of the current reform movement are lawmakers not educators. As political figures, they have sought changes that can be understood easily and implemented quickly. The result has been an emphasis on rewriting regulations" (Toch 1984, p. 174; also see Pipho 1984).

The expected opponents to elimination of secondary job training were identified in a previous section: instructional staff members in these programs, instructional staff members in other curricula who have been using the job training curricula as an outlet for their own unwanted students, and school administrators who must deal with both of these groups on a day-to-day basis. Opposition would also be expected from *some* employers—those who have relied upon the job training programs as an exclusive source of new hires in particular occupational categories. Similarly, individual and group advocacy on behalf of currently enrolled and prospective students in the job training curricula would be expected from the students

themselves, parents, and organizations representing special interest groups.

Given this formidable coalition of opposing interests, who would be expected to support elimination of job training from the high schools? Proprietary and postsecondary job training interests that would serve as partial substitutes for the secondary offerings would favor closure. So would advocacy interests on behalf of current and prospective students in the high school job training programs who view the curricula as damaging to the students' life chances. Employers who consider the secondary job training to be stigmatized by stringency weaknesses might also be expected to support program elimination, if reform is thought to be unachievable.

This alignment of advocates and adversaries reflects a combination of self-interests and beliefs about what role secondary-level job training plays in subsequent life chances. These beliefs require at least an implicit consideration of a hypothetical situation: What would the high school curriculum consist of in the absence of a job training component? The answer depends upon the resolution of a series of subsidiary matters. Would the affected instructional staff members be reassigned to academic responsibilities within the district? Would they be retrained to perform new professional responsibilities, or would they be dismissed? How would the students who would have enrolled in job training course work distribute themselves across other available courses? Who would succeed in this effort, and who would withdraw? Finally, how would employers who had relied upon the job training programs as a source of employees respond? Answers to these questions, in turn, require detailed information about local circumstances. What are the personnel rules in the district? What resources are available to offer appropriate support in the readjustment process for both students and instructional staff members? What alternatives does the employer community face?

The elimination option can be summarized as follows:

- **Action**—Terminate secondary-level job training
- **Taken by**—Local school board
- **Equity effect**—Uncertain, but extremely uneven
- **Efficiency effect**—Unknown

The equity and efficiency effects are both dependent upon forces that are somewhat unique in each locale. The short-term dollar costs of the closure could be substantial—

- *if* resources were forthcoming to ease the instructional staffs' transition;
- *if* a supportive approach would be taken to meet the needs of physically and mentally challenged refugees from the closed programs (and their future counterparts); and
- *if* the unique interests, talents, and ambitions of those who will not proceed on to postsecondary educational opportunities are recognized in simultaneous secondary-level reforms.

However, the costs borne by individual students and instructional staff members would be minimal.

In fact, fiscal constraints on local school districts and the forces that favor routinization and uniformity in our schools combine to offer a poor prospect for the complementary reforms that would be necessary to protect the interests of those who would be most directly affected by the closure. There *could* be a role here for State education officials, State legislators, and the Congress to recognize a need for external help. But, again, the

projected revenue picture is not favorable for action in any of these quarters.

What role might proprietary and postsecondary institutions serve here? Couldn't they be counted on to step in to meet the needs of the students who are now denied access to secondary job training? *Some* of the students' needs could be met in this way. Indeed, it is likely that more positive signals would be sent to employers after having completed many such programs than would have been acquired in the public high school setting. Employers would view these job candidates as requiring less expenditures on their part to place the individual in an independent production role. However, appealing to these alternative sources of job training as a justification for eliminating high school job training overlooks a compelling reason for maintaining job training in the public high schools: those who are least likely to realize their own potential, and thereby contribute to the Nation's well-being as well as their own, would be unlikely to qualify for acceptable proprietary or postsecondary opportunities. What does *acceptable* mean here? It distinguishes institutions that will promote an individual's life chances (conveying a positive signal) from those that will leave a person's life neutral or even diminished (conveying a negative signal). In other words, students who are deserving of societal nurture would be denied the vital sustenance to enable them to compete and to contribute throughout their adult lives.

Based on a belief that some high school students require and deserve the opportunity to participate in a curriculum other than one that is intended to prepare them for postsecondary educational pursuits, and having concluded that adequate resources to respond to these needs within the existing "academic" curricula are not likely to be forthcoming, the option of job training elimination is rejected. The net effect on both individual life chances and on the Nation's international competitiveness would almost certainly be negative. This leaves two remaining options to be examined: reform job training to minimize distinctions between vocational and academic curricula, or reform job training to maximize these differences.

**Option: Reform High School Job Training to Minimize Distinctions between Vocational and Academic Components**

Consider the following conclusions:

- A substantial proportion of those who enter postsecondary education do not complete a certificate or degree program.

- The more alike individual students' educational attainment becomes, the greater the reliance that must be given to noneducation signals in assessing individuals in later life.

A major 20th-century achievement in the United States has been the establishment of an adolescent buffer between the preteen years and adult responsibilities for *many* but not all youths. The second stated conclusion offers a rationale for taking advantage of this luxury to reduce institutional origins of subsequent barriers to self-realization and societal contribution.

An essential goal in blurring the distinction between academic and vocational curricula would be to deny those who are in a position to determine subsequent life chances an opportunity to reach their decision on the basis of curricular exposure in the high school. A compelling reason for choosing this denial strategy is that the curricular "choice" is extraordinarily imperfect for the purpose it serves in affecting subsequent life chances.

The action to blend academic and vocational curricula can be taken in several ways:

- *All* students can be required to participate in activities that are explicitly designed to promote the quality of their career decision making; to offer

a solid foundation for the subsequent acquisition of occupationally specific skills; and to provide generic life skills that will be useful in both work and nonwork settings.

- The academic and vocational distinctions can be maintained, but elements of each can be introduced into the other.

The latter approach would require the least dramatic reforms, but it would also be the least effective in achieving the desired blurring of distinctions. Transformation of whichever of the five traditional subject-matter clusters (agriculture, business and office, home economics, marketing and distributive, and trade and industry) is present in a given institutional setting would not be easy. The incumbent instructional staff members would in many cases be ill-prepared to revert to other instructional responsibilities. Resources would be limited for expansion of core competency development and for new expectations of student constituencies that had previously been given minimal attention.

Taking the uniform approach instead would attract opponents representing different interests. Some of those who seek the establishment of competitive advantages for *selected* students would resist reforms that promise to diminish this advantage. The very features of a high school curriculum that are seen as unduly narrow by some are seen as a basic strength of the institution by others. One's assessment of the respective views is dependent, in part, upon beliefs about the importance high school curriculum exposure has on subsequent life chances.

Given this background information, what actions could be taken, by whom, with what equity and efficiency consequences? The Congress, State legislators, or local elected officials could appropriate funds with stipulations that occupationally specific instruction would *not* be eligible for coverage. This provision could be carried to the point of denying such funding to any administrative entity that funds occupationally specific training in the high schools, even if this funding originates from other sources. This would be the ultimate fiscal "stick." The same end could be achieved through regulatory action, rather than statutory reform, at the State or local levels. Alternatively, fiscal "carrots" could be offered in the form of dollar inducements to undertake reforms to eliminate occupationally specific job training in the high schools and to introduce new core competencies in career decision-making skills, prerequisite skills to achieve broad occupational objectives, and generic independent living skills.

The equity objective of such statutory, regulatory, and fiscal reforms would be to diminish the distinctions that are now created at the secondary level among enrollees in academic *versus* vocational curricula. Those who believe it is premature to institutionalize distinctions that affect subsequent life chances through the high schools will favor such reforms. Those who seek to use the high schools to create such distinctions, and those who think that high schools "don't matter," will oppose these reforms.

What effects would reforms of this type be expected to have on (1) individual competitiveness, (2) institutional competitiveness, and (3) the Nation's international competitiveness? With respect to individual competitiveness, one's answer again depends upon beliefs about the determinants of life chances. The proposed reforms *could* impede the ability of both academic and vocational enrollees to signal their educational achievements. This problem could be overcome by accompanying the reforms with more refined documentation of actual competency attainment (e.g., the "passport" idea that is being touted in some quarters).

Similarly, the reforms could substitute educational activities that are of lesser value for current opportunities that are more highly valued vis-a-vis subsequent life chances. Here, an inflexible total commitment to

educational activities must be allocated into specific requirements. Mandatory increases in one area necessarily introduce mandatory decreases in another. (Criticisms of the push for academic excellence to date focus too little attention on what must be given up by whom and what effect this will have on their life chances.) Will aspirants to prestigious postsecondary opportunities be hampered in their candidacy if they are required to substitute generic life skills development for exposure to advanced mathematics, physics, or foreign languages? Will those who seek immediate employment upon graduation in the electronic maintenance field be placed at a competitive disadvantage if they are required to demonstrate communication skills competency at the expense of additional hands-on time with electronic instruments?

This is what the signaling concept is all about. Furthermore, does it matter whether the college aspirant or seeker of immediate employment upon high school graduation is female or a member of a minority group? If it does matter, is the differential treatment favorable or unfavorable? Does it make any difference whether the recipient of the high school credential is physically or mentally challenged? On the one hand, educational reforms that increase the similarity of high school cognitive skill acquisition increase the vulnerability of these groups to subsequent social discrimination because subjective signals must be substituted for previously available distinctions in educational credentials. But, on the other hand, forced reliance on more subjective factors can open doors to those who would previously have been excluded through no conscious choice of their own, and to those who had been directed away from stringent curricula that offer a positive signal and into a stigmatized curriculum that delivers a negative signal.

A conclusion about the effect on individual competitiveness of reform actions that would blur the distinction between academic and vocational curricula cannot be simply stated. Those who now benefit from being favorably distinguished would lose, and those who now suffer from being stigmatized would stand to gain. The *option* value of a high school education would be enhanced for both groups. But caution must be exercised here, too. The expected value of the option is based, in part, on the likelihood that the option will actually be exercised. The college-bound student who actually completes postsecondary studies *may* stand to lose something by substituting vocational awareness activities for college preparatory course work. The high school student who, immediately upon graduation, enters an occupation that remains a self-fulfilling and productive opportunity for an entire working life *may* give up something by substituting core competency activities for occupationally specific study. However, the evidence of both voluntary and involuntary redirection of goals and opportunities is so overwhelming that a strong case can be made for development of a foundation for future redirection.

There are two possible exceptions to this conclusion: (1) high school activities may not matter much in subsequent life chances, and (2) there may be enough institutional safety nets available elsewhere that deficiencies occurring in the high school can be reversed later. Available evidence is inconsistent with the first exception, and little faith can be placed in the second at this time (Levin and Schutze 1983).

Part of the answer to questions about the individual competitiveness effects of reforms to blur academic and vocational distinctions is dependent upon institutional competitiveness. Recall that we are not evaluated as individuals because it would be too costly for most purposes to gather information about our unique qualities. Instead, we are grouped with others to economize on this collection of information. Clearly, one important grouping involves our educational credential(s). Individual institutions and often particular curricula within those schools have acquired reputations. These reputations permit external parties to classify individuals easily according to their exposure to these curricula.

The problem that exists now is the limited discretion an individual school administrator has to alter the reputation of that school or of individual curricula within that school. In the early 1970s, educational option schools began to appear (Weiss 1984). These public alternatives to the traditional general or comprehensive neighborhood high school, complementing private school options, introduced new forces into the public education arena. Both the public option schools and the private schools offer an opportunity for individual students to acquire distinctive positive attributes. At the same time, of course, the presence of these alternatives creates a new force to push those who do not gain access to the privileged status to a less competitive position. The allocation of these opportunities to distinguish oneself has not affected everyone equally. Indeed, if it has, the original intent would have been foiled; the insulation from peer identification would not have been achieved.

There now appears to be increasing competition among traditional neighborhood schools and between the public and private sectors to offer more options to individual students (Arky 1984). Students are said to have more flexibility to select a curriculum, which then determines an institutional affiliation, rather than the historical practice of being assigned to an institution on the basis of residential location, which then determines the curricular menu that was available. Two observations can be offered about this movement:

- Many of these institutions, both public and private, are striving for public recognition of their excellence. This translates into selective admissions criteria, which, in turn, limits accessibility for those who are expected to represent an unusual demand on available resources and those who might prove to be poor placement prospects in immediate employment or subsequent educational opportunities. Distinctions among groups will be sharpened rather than diminished. This is intentional.

- Excessive duplication is likely to result in the short-term, as institutions strive to emulate each other in offering "trendy" curricula that provide prospects of substantial market appeal. A shakeout will follow as some institutions prosper and others atrophy. The question will then become: What new direction should be charted for the laggards, or should they simply be abandoned?

This movement toward greater institutional competition offers promise of individual competitive advantages for some and diminished competitiveness for others who do not gain access to the "elite" schools. This is not a new phenomenon. Indeed, the number of elite schools has clearly grown. This has democratized the premier institutions. It has also further isolated the excluded from competitive opportunities. Diversity is least likely to be available where the geographic concentration of school-age youth is lowest (e.g., in rural areas) and where an ability to pay is absent (e.g., in both rural and inner-city areas).

The combined effects of individual and institutional competitiveness on the Nation's economy introduce a momentous societal choice: What balance will be struck between feeding today's productive engine the fuel it needs to operate efficiently versus a conscious decision to forego some efficiency to accomplish equality of opportunity goals? A related question is, What sacrifice will be asked of today's citizens in the pursuit of National economic goals, and what promise will be made about the reward that will be forthcoming for having incurred this sacrifice?

Ouchi (1984) distinguishes market, bureaucratic, and clan forms of governance. The relevance of these concepts here is that the practical viability of proposed

educational reform depends, in part, upon which form of governance is used. A competitive market achieves equity on the spot if participation is truly voluntary; those who stand to lose will not engage in a market transaction. A bureaucratic form of governance that characterizes the educational arena in the United States today achieves equity by fiat; only when gross inequities appear and become visible to a broad constituency will reform be introduced. A clan, by contrast, consists of members bound together over an extended period of time, creating conditions for a *social memory*—a collective ability to remember which groups have been flexible and which have been selfish (Ouchi 1984). Through a clan form of governance, *serial* equity can be obtained. One group will voluntarily relinquish its right to participate in today's bounty for the good of the clan, *if* a strong, visible, and reliable commitment is made to redress this imbalance in the future.

The point here is that the international competitiveness of our Nation's economy today is said to require a push for excellence in secondary education. This push can be expected to shove a number of deserving individuals out of what might otherwise have been their ticket to self-realization and a more meaningful social contribution than is now likely to occur. Here's how each of Ouchi's forms of governance would respond to this situation:

- **The market**—The competitive market will ignore the "losers" in this push for excellence, because there is overwhelming historical evidence that not all of our young people will be needed to fuel the economy at the less-than-full-employment levels that have been targeted as National objectives in the past and that can be expected in the foreseeable future (although the shrinking youth cohort can be expected to result in *some* progress). Sole reliance on the market will sharpen the differences between winners and losers in the high school competition. Substantial investments in subsequent safety nets will be required.

- **The bureaucracy**—Today's environment of interstate competition for industrial growth guarantees that the bureaucratic result will be similar to the market outcome; resources will be focused on the best and brightest, others will be cast aside. Only in the event that gross violations of our societal norms of opportunity and justice become widely known might the bureaucratic result deviate from the market outcome to accommodate constituent demands for reform.

- **The clan**—Resources could still be focused on achieving international competitiveness that would limit the uniformity of access to preferred educational opportunities, but a *strong, visible, and reliable promise* would be made to establish the necessary safety nets to catch those who fall out of the streamlined system. Once caught, these individuals would be assured that their ambitions and potential contributions matter, too. The clan would then see to it that their willingness to step aside at one point is rewarded by societal sustenance at another time.

There is limited evidence that our Nation currently functions as a clan. Once cast aside, it is unlikely that remedial actions by today's institutions will restore full personal potential.

The following summary of the reform option to diminish distinctions between academic and vocational activities in the high school is offered:

- **Action**—Eliminate occupationally specific job training from the high schools and simultaneously increase the uniformity of remaining academic and vocational requirements for all students.

- **Taken by**—The Congress, State legislators, and local elected officials would have a role to play in offering fiscal enticements for compliance, or fiscal sanctions for nonconforming behavior. Statutory, regulatory, and appropriations actions would all be pertinent.

- **Equity effect**—It would become more difficult to tag students with distinctive identifications that might prove to be unduly prohibitive in their subsequent pursuit of life goals and societal contributions. This would operate to the detriment of today's favored students but to the advantage of those who are now stigmatized or pigeon-holed. The blurring of distinctions would benefit many students who are currently identified as "academic," as well as others who are now tagged as "vocational." Subsequent opportunities for each group might change. A blurring of distinctions within a single school could place that institution's students at a competitive disadvantage if other schools didn't follow suit, thereby permitting those who now use the curricular distinctions to continue to do so. Specialized public vocational schools would be eliminated. The interests of affected instructional staff members and administrators would have to be considered in deciding whether activation of this option would be feasible.

- **Efficiency effect**—Decision makers would find it more difficult to isolate the unique strengths of the vocational and academic achievers. This could be countered through the introduction of more sophisticated competency measures. If this were done, efficiency goals would be promoted at the expense of some equity goals. The pursuit of short-term competitiveness can override equally important societal obligations to those who don't or can't respond to the routine and uniform educational offerings currently available in many public high schools. The forces opposing abolishment of job training in the high school, or diminution of academic versus vocational distinctions, appear to be strong. The third reform option is to sharpen such distinctions consciously.

**Option: Reform High School Job Training to Sharpen Distinctions between Vocational and Academic Components**

The objective in each of the previous two reform options was to protect high school students from acquiring an educational tag that would restrict their subsequent flexibility to realize their personal potential while contributing to the Nation's well-being. In each case, it was assumed that inadequate corrective safety nets exist to restore the life chances of those who choose, or are required to accept, new directions. The point was, therefore, to emphasize flexibility to respond to unknown future options. It is important to recognize that neither of these reforms requires reliable information about the future skill requirements of jobs. The high school would be removed from a jobs orientation per se, focusing instead on core competence attainment. Occupationally specific skills would then have to be acquired on the job or in a postsecondary or proprietary setting.

This third option would not only retain job training in the high school, but it would sharpen the occupationally specific nature of that training. The rationale for doing so would be that postsecondary education is not in the cards for many high school students, so that immediate employability is an appropriate goal. Furthermore, both individual and the Nation's competitiveness can be enhanced *in the short-term* by reducing employers' costs to hire these high school graduates.

Equity considerations are also introduced in advocating an explicit commitment to high-quality, occupationally specific job training in the high school. It is argued that students with limited future orientation can be held in an occupationally specific job training curriculum but that their pursuit of immediate gratification would lead them to reject a uniform academic curriculum. Finally, the proprietary alternative is rejected by advocates of this high school reform on the basis of uneven student ability to pay and of suspicions about organizational motives (Feinberg 1984).

*If* occupationally specific job training is to be sought, *then* choices must be made among the occupational skill requirement scenarios that are promoted by multiple forecasters (Flynn 1984; Lemons 1984; Levin 1984; Lewis and Fraser 1984; National Academy of Sciences 1984; and Rumberger 1984b). The importance of this choice is dependent upon—

- the existence of corrective safety nets for those who are poorly served by a job training program that offers (1) the wrong skills; (2) inadequate preparation in the right skills; or (3) adequate preparation in the right skills, which are themselves inadequate to establish individual competitiveness;

- the malleability of instructional staff resources, facilities, and equipment in the face of anticipated *changes in* occupational skill requirements; and

- the confidence that can be placed in competitors not entering the market once a commitment of resources has been made to a particular job training focus.

There are two important aspects of the future of work in the United States that are pertinent here. One involves the number of job opportunities: Will there be enough jobs to absorb everyone who wants to work? Job training *may* be futile, if the Nation's international competitiveness falters or if social forces exclude recipients of job training from self-fulfilling and productive job opportunities. High school job training has a potential role to play in determining the gross number of jobs that become available, because it is potentially a source of cost savings to the Nation's employers (Kang and Bishop 1984). However, a second concern is of greater moment here: Will these jobs be more, or less, demanding of prior skill acquisition?

Substantial attention has been devoted to gauging the pace of technological innovation in the United States. Most observers agree that this pace has quickened in recent decades and that it will continue to do so. What analysts disagree about is the total and compositional effects of this innovation on occupational skill requirements. Will the net effect of the introduction of new production techniques and the demise of others be positive or negative? That is, will there be net job creation or destruction? Will this technological transformation of the workplace require a substantial increase in the embodied skills of the labor force, or will a widespread deskilling phenomenon occur? High school job training reforms should not assume that massive destruction of meaningful job opportunities will occur, although the accuracy of this statement can be challenged with respect to specific school district circumstances.

Flynn (1984) elaborates upon the following stages of a production life cycle:

- Introduction of a new production technology

- Growth in the application of this technology

- Maturation in this application

- Stabilization, or decline, as refined techniques are substituted

The local evolution of skill requirements and where they are acquired over this production life cycle are documented. First, requisite skills are self-taught within the innovating organization because there is no other available source. A second stage in the production life cycle is reached as the new skill requirements are diffused in a broadening network of applications. At this point, investments in training borne by the adoptors of the new technology become increasingly vulnerable. New adoptors now have a choice between incurring the direct costs of training themselves or luring an already qualified candidate away from other adoptors.

This transition from stage one to stage two reflects a movement from what economists call "firm-specific" skills to "general" skills. The former restricts the trained employee to a particular enterprise, whereas the latter permits transfer of productivity among enterprises. Once the diffusion of application has reached a critical threshold level, a third stage in the production life cycle becomes relevant. Now, external training sources become viable. Training of entire classes becomes possible, and mobility patterns create visible employment opportunities for those who are trained.

Finally, in the fourth stage of the production life cycle, a sorting-out phenomenon occurs among the public and proprietary schools that have introduced training tied to the "new" technology. This shake out happens quickly when instructional staff members, facilities, and equipment are either flexible or expendable. In such cases, the flow of trainees is adjusted to market demands. However, where flexibility or expendability is not present, the flow of trainees can be expected to continue without supporting market demand. Only extensive communication between graduates who don't find jobs that use their newly acquired skills and prospective entrants into the obsolete curriculum would be expected to divert the students to more productive educational activities.

The importance of the production life cycle concept lies in its implications for local high schools. What is "high tech" today will be routine tomorrow and obsolete the day after tomorrow. All technologies that are currently in use were once "high tech." The production technology we observe in use today is spread out along a continuum representing the production life cycle. Relatively few current applications are truly state of the art. The time profile of adoption of state-of-the-art technologies is a function of many forces (e.g., tax policies, international trade incentives or restrictions, capital and labor costs, and both current and projected product-service market conditions). The complexity of these forces adds to the educator's dilemma in trying to understand the labor market to which students' school experiences are expected to be transferable (Silberman 1983). But, if the reform option to sharpen the occupationally specific focus of high school is to be pursued, there is no alternative; curriculum choices must be made.

Available evidence indicates that the overwhelming preponderance of job openings during the next decade and beyond will be in quite traditional occupations. Several cautions must be noted though. First, the available information is imperfect. Second, it is necessary to distinguish clearly large numerical swings in employment levels from large rates of change in employment levels within an occupational category (Levin 1984). Third, "traditional" occupational categories may themselves exhibit substantial internal transformations of required skills.

Consideration of a reform option to increase occupationally specific job training in the high school must reckon with the following conclusions:

- The numerically important sources of occupational growth are unlikely to be in jobs that require high levels of scientific understanding and computational skill.

- The high-tech industries that can be expected to exhibit high growth *rates* employ mostly workers who are in quite traditional jobs.

- Today's high-tech industries can be expected to be supplanted by new high-tech industries that are unknown to most of us today.

- The occupational composition of employment in any given location can be expected to change as the production life cycle evolves. This is why the concept of recurrent education is appealing as a safety net.

These conclusions force the following realization: As the production life cycle evolves in a specific locality, the job training demands that will be made on the public high school will change.

So, what reforms can be introduced to sharpen the high school job training distinction? First and foremost, heed can be paid to the recurring call for greater stringency in the certification of competency achievements in attributes that are complementary to occupationally specific job training. For example, the National Academy of Sciences' report (1984) of the Panel on Secondary School Education for the Changing Workplace, entitled *High Schools and the Changing Workplace: The Employers' View*, came to this conclusion:

> The major asset required by employers of high school graduates seeking upwardly mobile careers is the ability to learn and to adapt to changes in the workplace. . . . The ability to learn will be the essential hallmark of the successful employee.
>
> Technical education, vocational training, and curricula providing specific job skills can enhance a student's employability, but cannot substitute for education in the core competencies. (p. xi)

These findings are consistent with those expressed in numerous recent examinations of the state of public secondary and postsecondary education (Boyer 1983; the National Commission on Excellence in Education 1983; National Institute of Education 1981; Sherman 1983; Sizer 1984; and U.S. Department of Education 1984). It is clear that many States have already begun to respond by taking advantage of what Gene Bottoms (1984) calls "this moment of crisis," which is comparable to Weick's (1984) "small win" opportunism cited earlier.

A second guideline for reform is found in the recent report of the Committee on Vocational Education and Economic Development in Depressed Areas, Commission on Behavioral and Social Sciences and Education, of the National Research Council (Sherman 1983):

> While we do recommend expanded efforts at collaboration between vocational education and the private sector, we do not believe that employers should assume greatly increased responsibility for education and training. (p. 67)

The committee's reservation about the potential for expanded employer responsibility is again tied to the economist's concepts of "firm-specific" and "general" training. Employers cannot be expected to invest in generally applicable skill development, which then leaves them vulnerable to competitors who have not borne these training costs, bidding the trained employees away.

This view contrasts with that recently expressed by Ernest Boyer in an article in the *New York Times* ("Growing Links" 1984): "Business and industry have a dramatic stake in the quality of education, and want to be much more than a partner in process rather than sitting back and taking what comes to them" (p. 15). But, he too cautions that the Adopt-a-School, or Partnerships in Education, movement "has become, in some instances, a slogan without clear meaning or direction" (ibid.).

In taking stock of this reform option, an external consensus has formed that certain core competencies must be stressed and that the business community does not offer an unlimited source of high school job training support. The schools become highly vulnerable in this situation. Demands for reform are made if successful job placements are sought, but the wherewithal to accomplish the task is unspecific.

The following actions warrant further examination:

- Introduce, through either statutory or regulatory authority, personnel rules that permit greater administrative discretion to terminate instructional staff members whose services are no longer consistent with an institution's current requirements. The resulting increase in incumbent insecurity could then be compensated for through new salary schedules.

- Expand funding and regulatory authority for instructional staff movement between school and production settings.

- Examine potential financial incentives that can be created by local, State, or Federal authorities to enhance institutional flexibility to acquire appropriate equipment and materials for instructional purposes.

The objective of each of these actions would be to increase the discretion a local school administrator has to assemble the best package of educational resources that can be acquired for the available money.

The interests of incumbent instructional staff members are not overlooked here. Public high schools exhibit the same restrictions on terminating or reassigning employees that one would expect to find in any organization where (1) the jobs are worth protecting and (2) threats to incumbency are feared. The point is that these restrictions impose spillover costs on recurring waves of students who, in some instances, would have been better served by a different instructor. The frequency of such circumstances arising could be reduced through action on the second proposal to encourage routine instructional staff movement between educational and production settings. The magnitude of the spillover costs on students depends upon how much importance employers place on a particular instructor's supervision.

Instructional staff members in occupationally specific job training are singled out for what some readers will consider to be unacceptable vulnerability. They are singled out precisely because the educational activity that justifies their presence in the first place is itself uniquely sensitive to market forces. The core competencies evolve slowly through time. Occupationally specific job training requirements may change abruptly, depending upon the geographic scope of the market that is serviced and the technological forces that affect the curriculum. *If* the actual skill content of the training program matters, and *if* technological change has a pervasive effect on high school curricula, *then* the costs of compensating expendable instructional staff members would expectedly be small relative to the social savings realized in maintaining up-to-date job training. The problem here is that there is no routinely available institutional mechanism to translate these savings into a reserve for compensating the terminated staff members. The recent election results can be read as a signal that tax avoidance is a fairly high priority in our Nation at this time.

Innovative possibilities exist here. State legislative action could permit employers who must now comply with unemployment compensation tax statutes to receive a tax credit for expenditures that would reduce future draw upon the unemployment insurance trust fund. Financial and in-kind contributions to high school job training could be considered sources of such future savings in unemployment insurance benefit payments.

Obviously, this is simply a backdoor way to acquire tax revenues. But, there may be a substantial externality realized in the form of greater employer interest in, and commitment to, high school job training.

Twelve States are said to be in varying stages of linking 2 years of high school job training with 2 years of postsecondary training in occupational areas for which 2 years at either level alone fall short of meeting employers' hiring requirements (Bottoms 1984). This movement offers new opportunities but also new dangers. What will happen to those who complete only the first 2 years? Will this offer a positive signal that is worthwhile in the marketplace? At whose expense will these resources be acquired?

Escalation of educational credentialing leaves those who fall by the wayside in ever greater competitive trouble. Presumably, the employer community is enthusiastic about this new movement because it will introduce a new screening procedure for reducing the employers' costs of hiring and training. The postsecondary sector will be enthusiastic because it offers that group access to new students at a time when the potential pool of applicants is diminishing. Some high school instructional staff members will be enthusiastic because it permits them to establish more stringent requirements for participation, giving them an elite group of students. What will happen to those who are shunted aside? Sharpened distinctions in the high school curricula create opportunities for some and obstacles for others.

The option to increase distinctions between academic and vocational curricula in the high school can be summarized as follows:

- **Action**—Focus on occupationally specific job training. Don't expect dramatic increases in substantive involvement by employers. Explore statutory and regulatory changes that would increase administrative discretion to put together the "best" educational package possible with the dollar resources that are available. Examine truly innovative statutory opportunities to secure new sources of funds and new reasons for employer cooperation, without necessarily increasing taxes.

- **Taken by**—Educational administrators at the local level are unlikely to be able to introduce needed changes here in the absence of strong legislative and State department of education administrative support. The political forces that would be expected to rise up in opposition to necessary changes would be formidable. The inducements to give school administrators greater discretion would have to be attractive.

- **Equity effect**—*If* instructional staff members in the occupationally specific job training programs are given appropriate compensation for relinquishing job tenure rights, *then* their opposition can be neutralized or reversed.

  Students who gain access to a "better" curriculum because of the reforms will gain. Students who are excluded from the perhaps more stringent curricula will be placed at a competitive disadvantage that had not previously existed. Their interests could be accommodated through devotion of resources necessary to restore their competitiveness, but there are many reasons why concern should be expressed about the likelihood that this would happen. The short-term benefits realized by those who gain access to the preferred occupationally specific programs must be weighed against their subsequent vulnerability if market forces turn against them. Again, recurrent training opportunities could insulate students from such eventualities.

- **Efficiency effect**—In the short-term, this option would be expected to have the most direct, positive effect on individual, institutional, and the Nation's competitiveness. This conclusion assumes that the occupationally specific job training is consistent with production requirements and that this source of trained young people doesn't simply substitute for an already existing source of supply or one that would absorb fewer resources.

The three fundamental options for reforming high school job training that have been assessed here offer opportunities for actions to be taken by the Congress, the U.S. Department of Education, State legislatures, State departments of education, local elected officials and school boards, school administrators and instructional staff members, students, parents, employers, and the community at large.

Pursuit of small wins is best done locally, although enabling actions must often come first from higher jurisdictions. It is particularly important to guard against today's small wins being bought with a hidden cost appearing elsewhere or in the future. The transition from school to work can be facilitated by stripping away those difficult to serve and by foregoing attention to a need for future flexibility—the proprietary sector has proven this. It is, therefore, particularly important to accompany this discussion of job training reform options with consideration of reform actions affecting who is given an opportunity to participate in these reformed curricula.

### Student Access Reforms

The basic issue now, as well as after high school job training program reforms, is whether well-informed student choice of curriculum is permitted, constrained only by resource availability and reasonable entrance requirements.

Title III, part D, of the Carl D. Perkins Vocational Education Act authorizes comprehensive career guidance and counseling programs. Title IV, part C, continues authorization for the National Occupational Information Coordinating Committee. Other titles of this act authorize similar supportive activities (e.g., title II, part B, that authorizes program improvement, innovation, and expansion; and title III, part E, that provides for industry-education partnerships for training in high-technology occupations). So, there is no shortage of enabling authorizations for continued improvement of the information base upon which students' choices are made. Again, this information base assumes a lesser importance if occupationally specific job training is eliminated from the high school setting. But, if the improved occupationally specific job training reform option is chosen, accurate information takes on greater importance than ever before. What student access reforms are relevant here?

- Sex equity
- Racial equity
- Physically and mentally challenged student equity

How are these equity objectives to be reconciled with the pursuit of institutional and National competitiveness? Should training be offered, despite known discrimination in access to employment opportunities utilizing the skills learned? These are not easy questions to answer. An unbridled pursuit of efficiency, which results in the exclusion of students simply because they may prove to be more difficult to place with discriminating employers, is unacceptable. However, two observations are in order:

- The excuse of having no choice in the matter because, say, it is known that employers won't hire a physically challenged candidate is abused.

- Failure to provide job training opportunities permits those who discriminate to continue without challenge.

But, what should be said to the student aspirant who is thought to face discriminatory prospects? Should they be left to discover this upon graduation, at which time their training investment will have been "wasted"? Again, there is no easy answer. Discrimination is a probabilistic event—some do, and some don't; and it isn't necessarily clear which is which. Certainly, aspirants should be informed concerning the demographic composition of the occupation to which they aspire. But, this will be imperfect information that may or may not be current and applicable to the locality in which the student expects to seek work.

What response should be given to the curriculum supervisor who asks what is wrong with establishing entry requirements that have an uneven impact on students who aspire to enter the curriculum but don't have a reasonable probability of success in completing the curriculum? Suppose we conclude that this behavior is acceptable, when considered in isolation. We then discover that *all* job training opportunities have similar requirements, so that students may be excluded from any of the curricula. Does this change our answer? The point is that *some* provision must be made for those who are placed at a competitive disadvantage through no fault of their own. But the competitive pressures within and among high schools promote separation.

The competitive pressures introduced in the schools by personal characteristics (e.g., sex, race, and physical or mental challenge) would offer no internal advantage or disadvantage to a specific curriculum within a single high school if—

- external social forces had not created prior group affiliation differences in cognitive learning;
- internal peer influences did not create group-based differences.

In fact, family influences, household income, residential location, social promotion practices, and adult advice received prior to high school enrollment combine to create a situation in which the demographic characteristics of aspirants to particular curricula will differ. The idea of educational option schools offers some reason to hope that these concentrations can be reduced but certainly not eliminated overnight.

Competition among public schools, and between public and private schools, presents a related problem. Here prestige can be built at the expense of exclusion. The option schools represent a danger here. Some conclude that the answer is to promote the Nation's competitiveness by aggressively pursuing elite opportunities for those who are positioned to take full advantage of these opportunities, while reserving resources for, and social commitments to, those who are not admitted. The problem, of course, is that this separation creates a potential for stigma. Those who have not been chosen will prosper *only* if the economy needs them.

What about those students who don't qualify through their own actions or inaction? Are they less worthy of society's attention? Historically, the answer has been "yes," although the distinction between one's own and others' fault may be difficult to make with precision. Once beyond the uniformity of the high school curriculum, it is difficult, but certainly not impossible, to recoup. Again, one's response will be heavily dependent upon beliefs about the maturation process and the extent to which flexibility should be promoted in society's interest, if not in the interest of the recalcitrant youths themselves.

## Conclusion

Two themes have been carried throughout this analysis of reforms that might be

introduced in the Nation's public high schools' job training. One theme has focused on ways to create a fluid environment in which administrative discretion can be exercised to promote competitive offerings. The second theme has recorded the uneven impacts that efficiency-based reforms would be expected to have on different constituencies of the public education system.

The following conclusions have been reached:

- In addition to cognitive skill acquisition, other criteria affect students' subsequent employment opportunities.
- High school instructional staff members can choose to include or not to include development of these affective attributes. Similarly, they can offer more or less documentation of competencies in cognitive skills.
- Elaborated documentation of students' cognitive and affective competencies would promote their competitiveness.
- The refined documentation of achievements would further restrict the competitiveness of nonachievers.
- Employers who hire high school graduates would benefit in the short-term by the clearer signal of student accomplishment, *if* this accurately predicts on-the-job potential.
- The finality of signals conveyed by high school curriculum exposure is inconsistent with what is known about subsequent employment and postsecondary education patterns.
- The pursuit of excellence in either academic or vocational curricula is achieved at the expense of those who are unable to meet the new level of stringency.
- Educational stringency should translate into enhanced individual and institutional competitiveness for those who gain access to the privileged agenda.
- This same educational stringency will doom the future individual and institutional outlook for those who fail to meet the requirements of this new agenda.
- There is no reason to think that *all* high school students will be sought after at projected levels of National economic growth.
- Some students will therefore be cast aside in the push for excellence.
- The response of the high school community to this state of affairs could be to abolish job training curricula, to blur academic and vocational distinctions, or to sharpen these distinctions.
- One's choice among these options depends upon what responsibility is held with respect to high school job training and what beliefs one expresses about the forces that influence students' subsequent employment opportunities.
- The interests of those who focus on the here and now usually dominate the interests of those who are concerned with future options. This tilts the decision-making process away from hypothetical future costs and toward observed current benefits such as immediate job placement prospects.
- The production life cycle guarantees that today's high-tech jobs will be tomorrow's routine opportunities. Then they will fade away to be replaced by a new technology. The timing of this process is uneven

across technologies and geographic locations.

- Actions taken in one curriculum, one school, or even one State will create spillover effects in other quarters. These effects may not concern the decision-making parties, but they are of interest from a social perspective.

The focus throughout this paper has been on labor market considerations. Individual self-fulfillment and societal contribution have been the guiding criteria. Recently, 18 *non*market effects of schooling also have been cited (Haveman and Wolfe 1984). This considerably broadens the scope for assessment of high school job training. Here, only individual, institutional, and National equity and efficiency effects have been explored. Based upon this assessment, what recommendations are offered?

## RECOMMENDATIONS

Recently, Finn (1984) posed the following questions: "Is formal education—the kind one gets in school—fundamentally an extension of the family? Or is it one of the premier functions of the larger society?" (p. 30). His point is that those who answer yes to the first question and no to the second will favor highly diverse educational opportunities; those who answer no to the first question and yes to the second will seek substantial uniformity in the educational process. Finn concludes that today's educational reformers split down the middle on these two visions, with many wishing to have it both ways. His questions help us understand the diversity of answers that have been given to queries about the strengths and weaknesses of job training in today's high school.

The recommendations that follow are intended to promote reforms of individual, institutional, and National competitiveness, while safeguarding the opportunity for each high school student to contribute through realization of their individual potentials. Again, these recommendations are offered in the spirit of small wins: local and State reforms are preferred to National mandates. What is right for one high school, school district, or State may not serve a counterpart equally well.

**Recommendation: Performance-based fund allocation formulas must be assessed with great care to ensure that the probable consequences are consistent with what is intended.**

Performance is the combined outcome of two forces: capability and effort. Different combinations of the two can produce the same level of performance, both individually and organizationally. The choice of poorly thought through allocation formulas can quickly result in the rejection of "costly" students in favor of less needy but more easily served students. There is evidence that this "creaming" phenomenon is occurring in Job Training Partnership Act programs, for example (Walker et al. 1984). The threat here is that public high school job training will be denied to an even greater extent then it has to date to the economically disadvantaged, to minorities, to the physically and mentally challenged, and to women who seek access to selected programs.

**Recommendation: Examine collaborative arrangements between high schools and postsecondary institutions to ensure that the required resource commitments and student participation requirements are consistent with both equity and efficiency objectives.**

Some occupationally specific training clearly requires more than a 2-year curriculum. It is less clear when this training should begin and end. Any curriculum that embraces both the high school and postsecondary levels risks attrition between the two. It is, therefore important to determine whether a plateau is reached at the transition point that offers those who leave at this point a competitive advantage over those who never entered the curriculum in the first place. In addition, the resources to participate in these two-plus-two programs must necessarily be withheld from other uses. Of particular concern is their withdrawal from solely high school-based job training offerings that are likely to remain the best bet many students have to achieve viable job opportunities upon graduation.

**Recommendation: Opportunities to achieve core competencies through job training curricula in the high schools should be aggressively pursued.**

Some States are beginning to introduce changes in regulations that permit certification in written communication and analytical reasoning competencies through completion of vocational course work. It is of the utmost importance to disseminate widely information about the specific approaches that have been taken to accomplish this, and perhaps more important to identify barriers to achieving more reforms of this type.

**Recommendation: Criteria for Federal and State funds eligibility should be changed from who is served to how they are served.**

It is necessary to dedicate funds to specific purposes and groups that are high on the Nation's agenda to enhance competitive opportunities. No issue is taken with this recognition. The problem arises when process goals are accepted as satisfactory evidence of performance, rather than requiring more stringent effectiveness measures of performance. A great disservice has already been done to students who have been counseled to move from one curriculum choice to another because a "quota" had to be met or because a minimum number of enrollees was required to justify the assigned staff commitment. Judging sex equity accomplishments on the basis of enrollment patterns alone is an exceedingly mistaken practice.

**Recommendation: The Congress, and particularly State legislatures, should introduce creative enabling statutes that will promote competition within and among the public high schools and between them and private schools.**

Those who believe that the public sector should only absorb enough of the Nation's resources to do what the private sector cannot or will not do will have no enthusiasm for this proposal. However, those who believe that Ouchi's bureaucratic and clan forms of governance are preferred to the competitive market's results will want to examine this recommendation more carefully. It stands to reason that if the economy doesn't require everyone's services, some screening institutions must be established to determine who is admitted to productive job opportunity and who is turned away. Private schools have no social obligation to admit everyone who views schooling as a ticket to a job. The public schools do have a social obligation to act as an advocate on behalf of all comers. This advocacy requires differential resource commitments in some cases. The key issue for members of Congress and State legislators is what performance criteria to adopt. On the one hand, National competitiveness is promoted by focusing on the best and brightest. On the other hand, individual competitiveness is promoted by focusing on those who are most in need of differential attention. We might well be surprised how much overlap between these two groups is revealed, if the latter group's access is promoted.

**Recommendation: State legislators should consider opening their unemployment compensation statutes to innovative tax credit opportunities that would permit employers to choose between routinely replenishing the benefit trust fund or supporting high school job training as a way to diminish future draws upon this fund.**

Today's prosperous economic conditions offer an attractive opportunity to consider innovative ways to restructure future fiscal commitments away from anticipated social transfer payments and toward productivity enhancements. The Nation's international competitiveness can be promoted at the same time that individual competitiveness is fostered. When such opportunities exist, advantage should be taken of them.

**Recommendation: Commitments to occupationally specific job training in the high school should be accompanied by**

**congressional and State legislative support for routine access to recurrent training opportunities throughout our working lives.**

The major reason given for opposition to the offering of occupationally specific job training in the high school is that the pervasiveness and rapidity of technological change will soon render many of the skills learned obsolete. These opponents choose instead to promote investment in flexibility so that advantage can be taken of future redirection opportunities or requirements when and if they arise. The payoff to this contingency investment comes when redirection occurs. However, the time and money devoted now to anticipatory insurance, in the form of investments in student adaptability, have an opportunity cost; something else is given up to accommodate this hedging action.

An alternative approach would be to invest now in occupationally specific job training that is marketable immediately, thereby accruing net returns in the form of higher immediate productivity. Out of this incremental productivity, some portion could then be reserved for recurrent occupationally specific job training for those whose skills are rendered obsolete by shifts in consumer preferences, by technological change, or by evolving geographic patterns of advantage and disadvantage. Today, the cautious approach is necessary because there is no institutional safety net to catch those who fall from competitiveness in the future. This caution impedes immediate competitiveness, which, in turn, reduces the social dividend that would have been forthcoming if the commitment to future action had been taken.

**Recommendation: State legislators should examine the merits of creating job training vouchers that would be offered to those who cannot be effectively served by high school job training.**

Occupationally specific job training is costly. For many reasons, today's rural and selected other substate areas suffer from deficient access to high-quality and diverse high school job training curricula. Political realities suggest that this state of affairs is unlikely to change much in the foreseeable future. Therefore, a legislative deal can be cut with local authorities based on Ouchi's concept of serial equity. Allow high school job training resources to be funneled into other areas where economies of scale can be realized. In return, offer the high school graduates in these areas privileged eligibility to receive vouchers that could be used for proprietary or postsecondary job training available elsewhere following high school graduation. The rationale here is similar to that offered in the previous recommendation. Devotion of resources to their best use now will enhance the Nation's international competitiveness, which, in turn, will create a social dividend that can be applied, in part, to rewarding those who stood aside to permit the targeted allocation of funds. The geographic criterion for voucher eligibility proposed here could be complemented by other eligibility criteria, but caution is urged in doing so. In every case, the following question should be satisfactorily answered: Why is this group deserving of subsidy relative to other groups?

Job training in the high school is at a crossroad. Reforms are being called for by many interested individuals and organizations. Some call for abandonment of occupationally specific job training in the high school. This would be unconscionable in the absence of complementary reforms that would offer substitute sources of competitive opportunity for many students. Others call for reforms that would transform high school job training into a preparatory springboard to higher levels of occupationally specific job training on the job or in postsecondary institutions. This will be an optimal resolution of today's educational deficiencies for some students, but it is not the answer for those who won't be invited into these external and subsequent opportunities. Still other observers call for improvements in the occupationally specific content of high school job

training. Here, too, access remains a potential problem; so, performance incentives must be designed with great care.

Reform is in the air. The time is right in many States' local districts and individual high schools to act now. The analysis that has been presented here is intended to offer new insights into who the winners and losers will be if specified reforms are introduced. The recommendations offer ample opportunity for anyone who is interested in the future of high school job training to identify one or more actions that can be taken to promote a given reform.

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